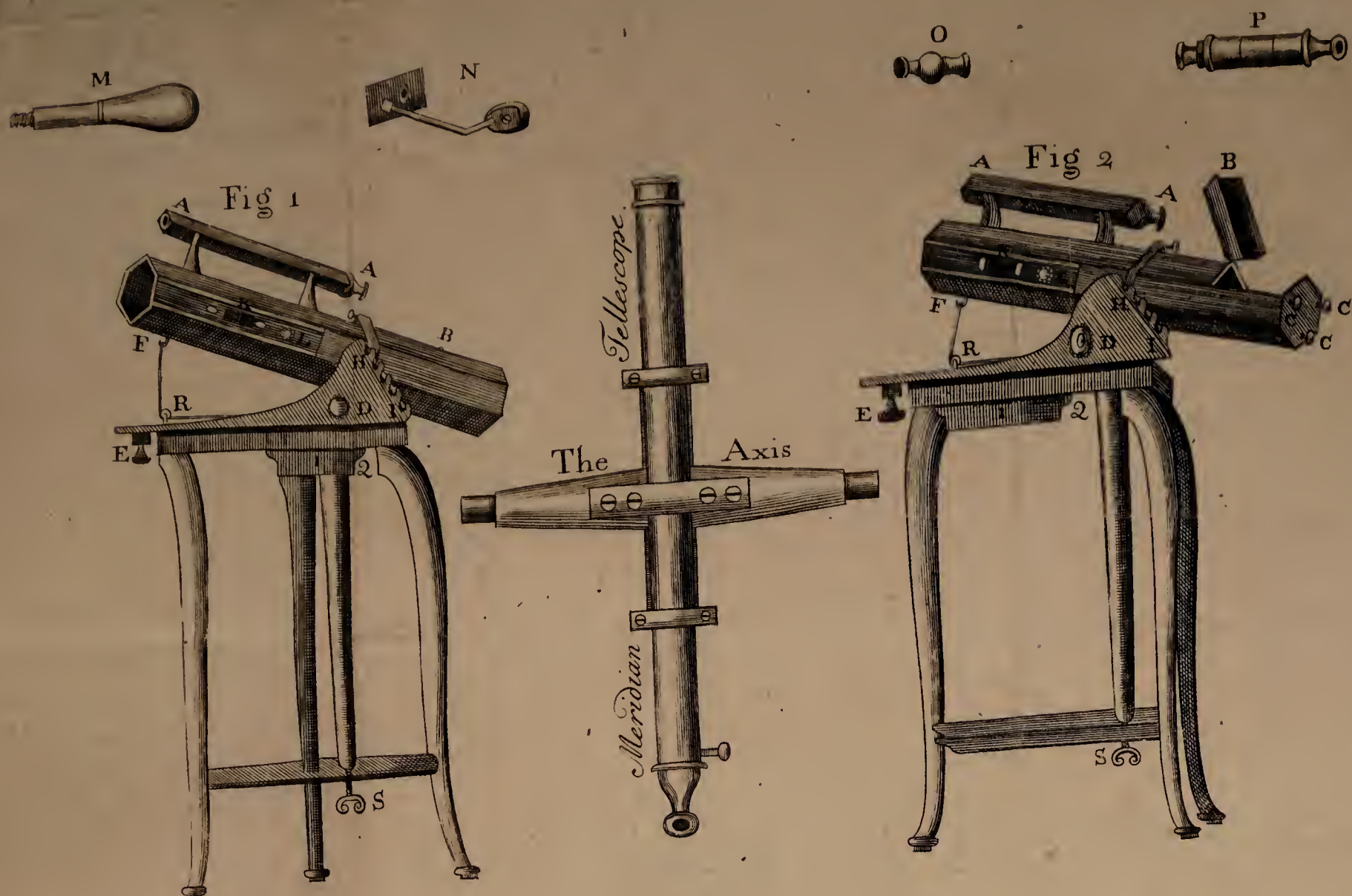


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N. VIII. c

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HEARNE, 1880



DIRECTIONS for fitting the Reflecting Telescopes for OBSERVATIONS.

FIRST take the Stopper out of the ^{Object} End of the great Tube; and ^{then} open both Ends of the short Telescope mark'd A A, which is called the Finder, and see that the String is in the Pulley R, and hook'd at F; then the Flap B is to be open'd as in Fig. 2. and the Handle M must be screw'd into the Back of the Reflex Metal, ^{or great Speculum} as it lies in the Drawer, and by that you must take it out, without touching the polish'd Face with your Fingers, or breathing on it; then place it into the Tube, ~~with the~~ ^{between the End} notch'd Side of the Metal downwards, and you will find a Piece of Brass in the Bottom of the Tube, which will fit into that Notch, and three Pieces of Wood for the Face of the Metal to lie against, which direct it into its right Position; then you must turn the three Screws C C C, by which the Face of the Metal must be gently push'd up against those three Pieces of Wood; but take Care that you do not force the Screws too hard, for if you do, the Metal will either bend or break, or the Pieces of Wood against which it bears, will be forc'd away. The Reflex Metal being thus carefully plac'd, the Flap B is then to be shut down, and hook'd. The next Thing to be done is, to take the little Speculum N out of the Drawer, by putting your Finger into the Hole of the Wood, ^{or brass Plate} and holding it by that Part, (without touching or breathing upon the Metal,) you must put it into its Place in the Slider K, and by turning the two oval Brass Plates over the Ends of it, it will be secured from falling out, and the little Speculum will be adjusted to its proper Place; then one of the Cells, with the Eye-Glasses O, or P, must be taken and screw'd into the Hole in the Slider K; and so is the Telescope fitly prepared for Observations.

DIRECTIONS for making OBSERVATIONS with these Telescopes.

THE Observer must first direct the whole Machine towards the Object he intends to observe; then setting down, he must put his Right-Hand to the Pin D, and his Left-Hand to the Pin E, and must place his Right-Eye to the Eye-Stop of the Finder A A, then by turning one or both the Pins D, or E, he will bring the Cross Hairs to cut the Object in the Center: He must then suddenly remove his Eye to the Eye-Glass in the great Tube at K, where he will see the Object which he had discover'd with the Finder, and by putting his Right-Hand to the Pin at L, and turning the same, the Slider K will be moved forwards or backwards, until he finds the Place where the Object appears the most plain and clear, which will always differ according to the Distance of the Object; for the Slider must be brought inwards in viewing a distant Object, and must be slid more outwards in viewing a nearer Object. For Night Objects, the single Eye-Glass in the Cell O is to be used; but for Day Objects, which are required to appear erect, the three Eye-Glasses in the Cell P are to be made use of.

N. B. If the Reflecting Metals are at any Time tarnished, they may be cleaned, by dropping a few Drops of Rectified Spirits of Wine on their Faces, and then rubbing them with a very fine Rag of Muslin, or Silk, until it's dry, and they will thereby be restored to their former Splendor.

These Reflecting Telescopes, with Micrometers fitted to them, if required, as also Long Refracting Telescopes, with proper Rests to support them; and Meridian Telescopes, useful to correct Clocks and Watches, by observing the exact Time of the Sun's coming to the Meridian; also large Quadrants of any Radius; and all other Mathematical Instruments, are accurately Made and Sold by

GEORGE HEARNE, Mathematical-Instrument-Maker

in Dognell Court White friars

near Fleet-Street, London.

[C. 1780]



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